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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/434,299	11/05/1999	JAMES A. JOHANSON	JOHANSON79-3	3784

7590

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EXAMINER

ANYA, CHARLES E

ART UNIT	PAPER NUMBER
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2126

DATE MAILED: 12/11/2003

17

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/434,299

Applicant(s)

JOHANSON ET AL.

Examiner

Charles E Anya

Art Unit

2126

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 October 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-17 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1 – 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Pat. No. 5, 802, 351 to Frampton in view U.S. Pat. No. 5,537,576 to Perets et al. and further in view of Feemster et al.

As to claim 1, Frampton teaches a Shared Memory (Dual Random Access Memory Device 31, Col. 3, Ln. 18 – 26), a First Processor (MCU System 21, Col. 3, Ln. 18 – 26), a Second Processor (DSP System 22, Col. 3, Ln. 18 – 26), a First Mailbox Portion (Figure 4, MCU to DSP ---→ Zero to Size – 1, Col. 5, Ln. 35 – 38), a Second Mailbox Portion (Figure 4, DSP to MCU --→ Size to Last, Col. 5, Ln. 35 – 38), a Low Physical Address End (Zero, Col. 5, Ln. 35 – 38), a High Physical Address (Size – 1, Col. 5, Ln. 35 – 38) and having write access to the first mailbox portion (Col. 8, Ln. 1 – 17).

Frampton do not explicitly teach filling downward toward the low physical address and the first processor as not having access to the second mailbox portion.

Perets teaches filling downward toward the low physical address (Col. 6, Ln. 32 – 41, Col. 8, Ln. 40 – 52).

Feemster teaches the first processor as not having access to the second mailbox portion (Col. 4, Ln. 4 – 16). It would have been obvious to improve upon the system of taught by Frampton by implementing the improvements detailed above because it would provide the system taught by Frampton with the enhanced capability of reduced latency, overhead and eliminate concern about overwriting information (Col. 4, Ln. 30 – 45).

As to claim 2, Frampton teaches second processor as having access to the second mailbox portion (Col. 7, Ln. 4 – 9).

Frampton does not explicitly teach the second processor as not having access to the second mailbox portion.

Feemster teaches the first processor as not having access to the second mailbox portion (Col. 4, Ln. 4 – 16). It would have been obvious to improve upon the system of taught by Frampton by implementing the improvements detailed above because it would provide the system taught by Frampton with the enhanced capability of reduced latency, overhead and eliminate concern about overwriting information (Col. 4, Ln. 24 – 45).

As to claim to 3, Frampton teaches the first processor as having read access to the first mailbox (Col. 6, Ln. 41 – 45).

Frampton is silent with reference to the first processor having read access to the second mailbox portion.

Feemster teaches a first processor that has read access to the second mailbox portion (Col. 4, Ln. 17 – 23). It would have been obvious to improve upon the system taught by

Frampton by implementing the improvements detailed above because it would provide the system of Frampton with the enhanced capability of eliminating latency (Col. 5, Ln. 1 – 11).

As to claim 4, claim 3 meets claim 4 except for the second processor having read access to the second mailbox portion.

Frampton is silent with reference to the second processor having read access to the second mailbox portion.

Feemster teaches a second processor that has read access to the second mailbox portion (Col. 4, Ln. 1 – 16). It would have been obvious to improve upon the system taught by Frampton by implementing the improvements detailed above because it would provide the system of Frampton with the enhanced capability of eliminating latency (Col. 5, Ln. 1 – 11).

As to claim 5, Frampton teaches a Dual Port Random Access Memory (Dual Port Random Access Memory Device 31, Col. 18 – 21).

As to claim 6, see the rejection of claims 1 and 3.

As to claim 7, see the rejection of claims 2 and 4.

As to claim 8, see the rejection of claim 1.

As to claim 9, Frampton teaches a Minimum Length (Zero, Col. 5, Ln. 9 – 24).

As to claim 10, Frampton teaches a Minimum Length (Size, Col. 5, Ln. 30 – 38).

As to claim 11, Frampton teaches reallocating a portion of a minimum length of the first physical address end (Col. 5, Ln. 30 – 36).

As to claim 12, Frampton teaches reallocating a portion of a minimum length of the second physical address end (Col. 5, Ln. 30 – 36). Also see the rejection of claim 1.

As to claim 13, see the rejection of claim 1.

As to claim 14, see the rejection of claim 9.

As to claim 15, see the rejection of claim 10.

As to claim 16, see the rejection of claim 11.

As to claim 17, see the rejection of claim 12.

Response to Arguments

2. Applicant's arguments filed 10/7/03 have been fully considered but they are not persuasive.

Applicant argues that the Frampton and Perets prior art references disclose separate blocks of memory for the first and second memory banks/mailboxes and as a consequence the first and second mailboxes are not defined over common memory address.

Examiner strongly agrees.

Applicant agrees with the Examiner that Perets discloses a first memory bank 14 that grows/fills from FFFF(hex) towards FE00(hex) (line 36) and a second memory bank 15 that grows/fills from 0 towards 0CFF(hex) (line 37). The next logically conclusion is to say that the address space 35 is a **common memory address** because the first and second memory banks (14 and 15) grow towards each other. Also, address space 35 starts from 0 to FFFF, thus a **common memory address**.

The Perets reference explicitly teaches the memory address space as **continuous memory address** (The Abstract and Col. 8 Ln. 18 – 29).

Conclusion

3. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Charles E Anya whose telephone number is (703) 305-3411. The examiner can normally be reached on M – F (First Friday off) from 8:30 am to 6:00 pm.

The fax phone number for the organization where this application or proceeding is assigned is (703) 746-7239.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3900.

Charles E Anya
Examiner
Art Unit 2126



JOHN FOLLANSBEE
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100